

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Markus Matuschek et al.

Conf. No.: 6025

Application No.: 10/541,750

Group Art Unit: Not yet assigned

Filed: July 8, 2005

Examiner: Not Yet Assigned

For: METHOD FOR PRODUCING CAROTENOIDS
OR THEIR PRECURSORS USING
GENETICALLY MODIFIED ORGANISMS OF
THE BLAKESLEA GENUS, CAROTENOIDS
OR THEIR PRECURSORS PRODUCED BY
SAID METHOD AND USE THEREOF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**STATEMENT TO SUPPORT FILING AND SUBMISSION
IN ACCORDANCE WITH 37 CFR §§1.821 THROUGH 1.825**

- ☒ **37 C.F.R. §1.821(f)** - I hereby state that the information recorded in computer readable form is identical to the written (on paper or compact disc) Sequence Listing submitted herewith.
- ☒ **37 C.F.R. §1.52(e)(4)** - I hereby state that the two compact discs are identical.
- ☒ **37 C.F.R. 1.821(g)** - I hereby state that the submission, filed in accordance with **37 C.F.R. 1.821(g)**, herein does not include new matter.
- ☐ **37 C.F.R. §1.821(h)** - I hereby state that the submission, filed in accordance with **37 C.F.R. §1.821(h)**, herein does not include new matter or go beyond the disclosure in the international application.
- ☒ **37 C.F.R. §1.825(a)** - I hereby state that the amendments, made in accordance with **37 C.F.R. §1.825(a)**, included in the substitute sheet(s) or compact disc(s) of the Sequence Listing are supported in the application, as filed, in the original sequence listing and on page 67 of the specification. I hereby state that the substitute sheet(s) of the Sequence Listing does (do) not include new matter.
- ☒ **37 C.F.R. §1.825(b)** - I hereby state that the substitute copy of the computer readable form, submitted in accordance with **37 C.F.R. §1.825(b)**, is the same as the amended Sequence Listing.

☐ I hereby state that the substitute copy of the computer readable form, submitted in accordance with 37 C.F.R. §1.825(d), contains identical data to that originally filed on

Respectfully submitted,

By 

Roberte M. D. Makowski

Registration No.: 55,421

CONNOLLY BOVE LODGE & HUTZ LLP

1007 North Orange Street

P.O. Box 2207

Wilmington, Delaware 19899

(302) 658-9141

(302) 658-5614 (Fax)

Attorney for Applicants

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Application No. (if known): 10/541750

Attorney Docket No.: 13311-00009-US

Certificate of Express Mailing Under 37 CFR 1.10

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MS Missing Parts
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P.O. Box 1450
Alexandria, VA 22313-1450

on May 23, 2006
Date



Signature

Tina Hall

Typed or printed name of person signing Certificate

Registration Number, if applicable

Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Amendment and Response to Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office (DO/EO/US) (5 pages)

Copy of Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office (DO/EO/US) (12 pages)

Copy of Initial Transmittal Letter, Fee Transmittal and return postcard (4 page)

Copy of Fee transmittal and Transmittal of Declaration with fax transmission papers (4 pages)

Statement to Support Filing and Submission in Accordance with 37 CFR §§1.821 through 1.825 (2 pages)

Sequence Listing on compact disc (3 discs total: COPY 1, COPY 2 and CRF Copy)

Certificate of mailing (1 page)

Postcard

Auto-Reply Facsimile Transmission



TO: Fax Sender at 302 661 2331

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9/6/2005 3:41:31 PM [Eastern Daylight Time]

Total Pages:

8 (including cover page)

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Page

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FAX TRANSMISSION

MS PCT

DATE: September 6, 2005

PTO IDENTIFIER: Application Number 10/541750

Patent Number

Inventor: Markus Matuschek et al.

MESSAGE TO: US Patent and Trademark Office

FAX NUMBER: (571) 273-8300

FROM: CONNOLLY BOVE LODGE & HUTZ LLP

Roberte M. D. Makowski, Ph.D.

PHONE: (302) 658-9141

Attorney Dkt. #: 13311-00009-US

PAGES (including Cover Sheet): 9

CONTENTS: Fee Transmittal (1 page)
 Transmittal Of Combined Declaration And Power Of Attorney (1 page)
 Combined Declaration And Power Of Attorney (5 pages)
 Charge \$130.00 to deposit account 05-2773
 Certificate of Transmission (1 page)

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#15410_1

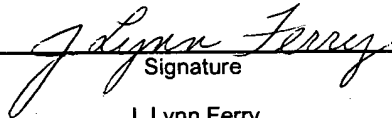
Application No. (if known): 10/541750

Attorney Docket No.: 13311-00009-US

Certificate of Transmission under 37 CFR 1.8

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on September 6, 2005
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J. Lynn Ferry

Typed or printed name of person signing Certificate

Registration Number, if applicable

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Telephone Number

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Fee Transmittal (1 page)

Transmittal Of Combined Declaration And Power Of Attorney (1 page)

Combined Declaration And Power Of Attorney (5 pages)

Charge \$130.00 to deposit account 03-2775

Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it displays a valid OMB control number.

<p><i>Effective on 12/08/2004.</i> Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).</p> <h2 style="margin: 0;">FEE TRANSMITTAL</h2> <h3 style="margin: 0;">For FY 2005</h3>		<p>Complete if Known</p>	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Application Number	10/541750
		Filing Date	July 8, 2005
		First Named Inventor	Markus Matuschek
		Examiner Name	Not Yet Assigned
		Art Unit	N/A
TOTAL AMOUNT OF PAYMENT		(\$)	130.00
		Attorney Docket No.	13311-00009-US

METHOD OF PAYMENT (check all that apply)

☐ Check
 ☐ Credit Card
 ☐ Money Order
 ☐ None
 ☐ Other (please identify): _____
☒ Deposit Account
 Deposit Account Number: 03-2775
 Deposit Account Name: Connolly Bove Lodge & Hutz LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below
 ☐ Charge fee(s) indicated below, except for the filing fee
☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17
 ☒ Credit any overpayments

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims Extra Claims Fee (\$) Fee Paid (\$)
 _____ - 20 = _____ x _____ = _____

Multiple Dependent Claims
Fee (\$) Fee Paid (\$)
 _____ _____

Indep. Claims Extra Claims Fee (\$) Fee Paid (\$)
 _____ - 3 = _____ x _____ = _____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets Extra Sheets Number of each additional 50 or fraction thereof Fee (\$) Fee Paid (\$)
 _____ - 100 = _____ / 50 _____ (round up to a whole number) x _____ = _____

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)
 Other (e.g., late filing surcharge): 1051 Surcharge-Late oath or declaration 130.00

SUBMITTED BY			
Signature		Registration No. (Attorney/Agent)	55,421
Name (Print/Type)	Roberte M. D. Makowski, Ph.D.	Telephone	(302) 658-9141
		Date	September 6, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Markus Matuschek et al.

Application No.: 10/541750

Group Art Unit: N/A

Filed: July 8, 2005

Examiner: Not Yet Assigned

For: METHOD FOR PRODUCING CAROTENOIDS
OR THEIR PRECURSORS USING
GENETICALLY MODIFIED ORGANISMS OF
THE BLAKESLEA GENUS, CAROTENOIDS
OR THEIR PRECURSORS PRODUCED BY
SAID METHOD AND USE THEREOF

TRANSMITTAL OF COMBINED DECLARATION AND POWER OF ATTORNEY

MS PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants transmit herewith the executed Combined Declaration And Power Of Attorney. Applicants have not received a Notification Of Missing Requirements.

Please charge our Deposit Account No. 03-2775 in the amount of \$130.00 covering the required fees. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 03-2775, under Order No. 13311-00009-US.

Dated: September 6, 2005

Respectfully submitted,

By 
Roberte M. D. Makowski, Ph.D.

Registration No.: 55,421
CONNOLLY BOVE LODGE & HUTZ LLP
1007 North Orange Street
P.O. Box 2207
Wilmington, Delaware 19899
(302) 658-9141
Attorney for Applicants

05/30/2006 MKAYPAQH 00000138 032775 10541750
01 FC:1617 130.00 DA

Due Date: July 9, 2005

Inventor: Markus Matuschek et al.

Application No.: Not Yet Assigned

Title: METHOD FOR PRODUCING CAROTENOIDS OR THEIR PRECURSORS USING
GENETICALLY MODIFIED ORGANISMS OF THE BLAKESLEA GENUS, CAROTENOIDS
OR THEIR PRECURSORS PRODUCED BY SAID METHOD AND USE THEREOF

Atty Docket No.: 13311-00009-US

Client Ref. No. : BASF/NAE877/03PCT

JC04 Rec'd PCT/PTO 08 JUL 2005

Filing Date:

Documents Filed: Transmittal Letter to the United States Designated-Elected Office,
Fee Transmittal, Application Data Sheet, Copy of the International application with
search report attached PCT Request, Forms PCT/ISA/206, 210, and 237, Forms
PCT/IPEA/409 and 408, English language translation of the International application,
Preliminary Amendment, Computer readable Sequence Listing (Disk/Paper copy),
Statement To Support Filing And Submission In Accordance With 37 CFR §§1.821
Thru 1.825, Information Disclosure Statement, SB08, with references, Certificate of
Express Mail, Authorization to charge \$2,950.00 to deposit account 03-2775

24 SHEETS OF DRAWINGS, CLAIMS AS AMENDED UNDER ARTICLE 34.
Via: Express Mail: Airbill No. EV622756155US

Handling Atty: RMM/thall

Client Contact:

Date: July 8, 2005

10/541750

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER 13311-00009-US
U.S. APPLICATION NO. (If known, see 37 CFR 1.5)		PRIORITY DATE CLAIMED 9 January 2003
INTERNATIONAL APPLICATION NO. PCT/EP2004/000099	INTERNATIONAL FILING DATE 9 January 2004	
TITLE OF INVENTION METHOD FOR PRODUCING CAROTENOIDS OR THEIR PRECURSORS USING GENETICALLY MODIFIED ORGANISMS OF THE BLAKESLEA GENUS, CAROTENOIDS OR THEIR PRECURSORS PRODUCED BY SAID METHOD AND USE THEREOF		
APPLICANT(S) FOR DO/EO/US Markus Matuschek et al.		

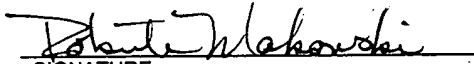
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a submission under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a submission under 35 U.S.C. 371.
3. ☐ This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. ☒ The US has been elected (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c)(2))
 - a. ☒ is attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)).
 - a. ☒ is attached hereto.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
 - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☐ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).

Items 11 to 20 below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A preliminary amendment.
14. ☒ An Application Data Sheet under 37 CFR 1.76.
15. ☐ A substitute specification.
16. ☐ A power of attorney and/or change of address letter.
17. ☒ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.
18. ☐ A second copy of the published International Application under 35 U.S.C. 154(d)(4).
19. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
20. ☒ Other items or information: **PCT Request, Forms PCT/ISA/206, 210, and 237, Forms PCT/IPEA/409 and 408, Statement To Support Filing And Submission In Accordance With 37 CFR §§1.821 Through 1.825, Postcard, Certificate of Express Mail, Claims As Amended Under Article 34**

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U.S. APPLICATION NO. (if known, see 37 CFR 1.5)		INTERNATIONAL APPLICATION NO. PCT/EP2004/000099		ATTORNEY'S DOCKET NUMBER 13311-00009-US	
The following fees have been submitted				CALCULATIONS	PTO USE ONLY
21. <input checked="" type="checkbox"/> Basic national fee \$300				\$ 300.00	
22. <input checked="" type="checkbox"/> Examination fee					
If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4) \$100					
All other situations \$200				\$ 200.00	
23. <input checked="" type="checkbox"/> Search fee					
Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority \$100					
International Search Report prepared and provided to the Office \$400					
All other situations \$500				\$ 400.00	
TOTAL OF 21, 22 and 23 =				\$ 900.00	
<input checked="" type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
Total Sheets	Extra sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE		
135 - 100 =	35 /50 =	1	x \$250.00	250.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	56 - 20 =	36	x 50.00	\$ 1,800.00	
Independent claims	1 - 3 =		x	\$ 0.00	
MULTIPLE DEPENDENT CLAIM(s) (if applicable)				\$	
TOTAL OF ABOVE CALCULATIONS =				\$ 2,950.00	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.				\$	
SUBTOTAL =				\$ 2,950.00	
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).				\$	
TOTAL NATIONAL FEE =				\$ 2,950.00	
Fee for recording the enclosed assignment (37 CFR 1.21 (h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$	
TOTAL FEES ENCLOSED =				\$ 2,950.00	
				Amount to be refunded:	\$
				Amount to be charged:	\$
<p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>03-2775</u> in the amount of \$ <u>2,950.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>03-2775</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> <p>NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the International Application to pending status.</p> <p>SEND ALL CORRESPONDENCE TO:</p> <div style="text-align: right; margin-right: 50px;">  SIGNATURE: Roberte M. D. Makowski, Ph.D. NAME </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div>CUSTOMER NUMBER: 23416</div> <div>55,421 REGISTRATION NUMBER</div> </div>					

Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818). <h2 style="text-align: center;">FEE TRANSMITTAL</h2> <h3 style="text-align: center;">For FY 2005</h3>		Complete if Known		
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Application Number	Not Yet Assigned	
		Filing Date	Concurrently Herewith	
		First Named Inventor	Markus Matuschek	
		Examiner Name	Not Yet Assigned	
		Art Unit	N/A	
TOTAL AMOUNT OF PAYMENT	(\$)	2,950.00	Attorney Docket No.	13311-00009-US

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 03-2775 Deposit Account Name: Connolly Bove Lodge & Hutz LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	900.00
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims
56	- 20 = 36	x 50.00 =	1,800.00	Fee (\$)

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
1	- 3 =	x	

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
135	- 100 = 35	/50 1 (round up to a whole number) x		

4. OTHER FEE(S)

	Fees Paid (\$)
Non-English Specification, \$130 fee (no small entity discount)	
Other (e.g., late filing surcharge):	
1631 Basic National Stage fee	300.00
1633 National Stage Examination Fee - all other ...	200.00
1642 National Stage Search Fee - search report ...	400.00
1681 National Stage application size fee - for each ...	250.00
1615 National Stage claims - extra total (over twenty)	1,800.00

SUBMITTED BY		Registration No.	55,421	Telephone	(302) 658-9141
Signature	<i>Roberte M. D. Makowski</i>	(Attorney/Agent)		Date	July 8, 2005
Name (Print/Type)	Roberte M. D. Makowski, Ph.D.				

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/541,750
Source: PCT
Date Processed by STIC: 07-19-2005

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER** **VERSION 4.2.2 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

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Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER:

10/541,750

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers: use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 <210> sequence id number
 <400> sequence id number
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- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n/Xaa "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid



PCT

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/541,750

DATE: 07/19/2005

TIME: 15:19:21

Input Set : A:\Final Sequence list-13311-00009-US.txt

Output Set: N:\CRF4\07192005\J541750.raw

Does Not Comply
Corrected Diskette Needed

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 4 Klein, Daniela
 5 Heinekamp, Thorsten
 6 Schmidt, Andre
 7 Brakhage, Axel
 8 Achatz, Brigitte
 10 <120> TITLE OF INVENTION: Method for producing carotenoids or their precursors using
 11 genetically modified organisms of the Blakeslea genus,
 12 carotenoids or their precursors produced by said method and use
 13 thereof
 15 <130> FILE REFERENCE: 13311-00009-US
 C--> 17 <140> CURRENT APPLICATION NUMBER: US/10/541,750
 C--> 17 <141> CURRENT FILING DATE: 2005-07-08
 17 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/000099
 18 <151> PRIOR FILING DATE: 2004-01-09
 20 <150> PRIOR APPLICATION NUMBER: DE 103 00 649.4
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 24 <151> PRIOR FILING DATE: 2003-09-08
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Invalid Reference

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DATE: 07/19/2005

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390	acacggcgcc	atcagagcag	ccgattgtct	gttgtgcccc	gtcatagccg	aatagcctct	6060
392	ccacccaagc	ggcggagaga	cctgcgtgca	atccatcttg	ttcaatcatg	cgaaacgatc	6120
394	cagatccggt	gcagattatt	tggattgaga	gtgaatatga	gactctaatt	ggataccgag	6180
396	gggaatttat	ggaacgtcag	tggagcattt	ttgacaagaa	atatttgcta	gctgatagt	6240
398	accttaggcg	acttttgaac	gcgcaataat	ggtttctgac	gtatgtgctt	agctcattaa	6300
400	actccagaaa	cccgcggctg	agtggctcct	tcaacgttgc	ggttctgtca	gttccaaacg	6360
402	taaaacggct	tgtcccgcgt	catcgccggg	ggtcataacg	tgactccctt	aattctccgc	6420
404	tcgatgatcag	attgtcggtt	cccgccttca	gtttaaacta	tcagtgtttg	acaggatata	6480
406	ttggcggtta	aacctaaagag	aaaagagcgt	ttattagaat	aatcgatat	ttaaaagggc	6540
408	gtgaaaaggt	ttatccgttc	gtccatttgt	atgtgcatgc	caaccacagg	gttccccaga	6600
410	tctggcgccg	gccagcgaga	cgagcaagat	tggccgcccgc	ccgaaacgat	ccgacagcgc	6660
412	gcccagcaca	ggtgcgcagg	caaattgcac	caacgcatac	agcgcagca	gaatgccata	6720
414	gtggggcggtg	acgtcggttcg	agtgaaccag	atcgccgagg	aggcccggca	gcaccggcat	6780
416	aatcaggccg	atgccgacag	cgtcgagcgc	gacagtgtc	agaattacga	tcaggggtat	6840
418	gttgggtttc	acgtctggcc	tccggaccag	cctccgctgg	tccgattgaa	cgcgcggtat	6900
420	ctttatcact	gataagttgg	tggacatatt	atgtttatca	gtgataaagt	gtcaagcatg	6960
422	acaaagttgc	agccgaatac	agtgatccgt	gcccgcctgg	acctgttgaa	cgaggtcggc	7020
424	gtagacggtc	tgacgacacg	caaactggcg	gaacggttgg	gggttcagca	gccggcgctt	7080
426	tactggcact	tcaggaaaca	gcgggcgctg	ctcgacgcac	tggccgaagc	catgctggcg	7140
428	gagaatcata	cgcattcggt	gccgagagcc	gacgacgact	ggcgctcatt	tctgatcggg	7200
430	aatgcccgca	gcttcaggca	ggcgctgtc	gcctaccgcg	atggcgcgcg	catccatgcc	7260
432	ggcacgcgac	cgggcgcacc	gcagatggaa	acggccgacg	cgagcttcg	cttccctctgc	7320
434	gaggcgggtt	tttcggccgg	ggacgccgtc	aatgcgctga	tgacaatcag	ctacttcact	7380
436	gttggggccg	tgcttgagga	gcaggccggc	gacagcgatg	ccggcgagcg	cggcggcacc	7440

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/541,750

DATE: 07/19/2005
TIME: 15:19:22

Input Set : A:\Final Sequence list-13311-00009-US.txt
Output Set: N:\CRP4\07192005\J541750.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 267,475,566
Seq#:3; N Pos. 3471,3679,3770
Seq#:4; N Pos. 227,318,526,8946,10028
Seq#:36; N Pos. 10264,10472,10563
Seq#:37; N Pos. 10264,10472,10563
Seq#:38; N Pos. 10264,10472,10563
Seq#:39; N Pos. 10264,10472,10563
Seq#:40; N Pos. 3471,3679,3770
Seq#:41; N Pos. 3471,3679,3770
Seq#:42; N Pos. 10264,10472,10563
Seq#:43; N Pos. 10264,10472,10563
Seq#:44; N Pos. 10264,10472,10563
Seq#:45; N Pos. 18970,19178,19269
Seq#:46; N Pos. 3471,3679,3770
Seq#:47; N Pos. 10264,10472,10563
Seq#:48; N Pos. 10264,10472,10563
Seq#:49; N Pos. 3471,3679,3770
Seq#:50; N Pos. 10264,10472,10563
Seq#:51; N Pos. 10264,10472,10563
Seq#:52; N Pos. 3,9
Seq#:53; N Pos. 3,6
Seq#:62; N Pos. 3471,3679,3770
Seq#:75; N Pos. 2694,4263

VERIFICATION SUMMARY

DATE: 07/19/2005

PATENT APPLICATION: US/10/541,750

TIME: 15:19:22

Input Set : A:\Final Sequence list-13311-00009-US.txt

Output Set: N:\CRF4\07192005\J541750.raw

L:17 M:270 C: Current Application Number differs, Replaced Current Application No
L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:146 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:240
M:341 Repeated in SeqNo=2
L:304 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:3420
M:341 Repeated in SeqNo=3
L:758 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:180
M:341 Repeated in SeqNo=4
L:3768 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:10260
M:341 Repeated in SeqNo=36
L:4339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:10260
M:341 Repeated in SeqNo=37
L:4965 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:10260
M:341 Repeated in SeqNo=38
L:5567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:10260
M:341 Repeated in SeqNo=39
L:5941 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:3420
M:341 Repeated in SeqNo=40
L:6583 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:3420
M:341 Repeated in SeqNo=41
L:7453 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:10260
M:341 Repeated in SeqNo=42
L:8067 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:10260
M:341 Repeated in SeqNo=43
L:8659 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:10260
M:341 Repeated in SeqNo=44
L:9541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:18960
M:341 Repeated in SeqNo=45
L:9699 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:3420
M:341 Repeated in SeqNo=46
L:10663 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:10260
M:341 Repeated in SeqNo=47
L:11281 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:10260
M:341 Repeated in SeqNo=48
L:11651 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:3420
M:341 Repeated in SeqNo=49
L:12521 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:10260
M:341 Repeated in SeqNo=50
L:13169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:10260
M:341 Repeated in SeqNo=51
L:13460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:0
L:13483 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53 after pos.:0
L:13721 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:62 after pos.:3420
M:341 Repeated in SeqNo=62
L:14607 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:2640
M:341 Repeated in SeqNo=75



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U.S. APPLICATION NUMBER NO. 10/541,750	FIRST NAMED APPLICANT Markus Matuschek	ATTY. DOCKET NO. 13311-00009-US		
		INTERNATIONAL APPLICATION NO. PCT/EP04/00099		
		<table border="1"> <tr> <td>I.A. FILING DATE 01/09/2004</td> <td>PRIORITY DATE 01/09/2003</td> </tr> </table>	I.A. FILING DATE 01/09/2004	PRIORITY DATE 01/09/2003
I.A. FILING DATE 01/09/2004	PRIORITY DATE 01/09/2003			

23416
 CONNOLLY BOVE LODGE & HUTZ, LLP
 P O BOX 2207
 WILMINGTON, DE 19899

CONFIRMATION NO. 6025

371 FORMALITIES LETTER



OC000000018334411

Date Mailed: 03/24/2006

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 07/08/2005
- English Translation of the IA filed on 07/08/2005
- Copy of the International Search Report filed on 07/08/2005
- Copy of IPE Report filed on 07/08/2005
- Preliminary Amendments filed on 07/08/2005
- Information Disclosure Statements filed on 07/08/2005
- Biochemical Sequence Diskette filed on 07/08/2005
- Oath or Declaration filed on 09/06/2005
- Biochemical Sequence Listing filed on 07/08/2005
- U.S. Basic National Fees filed on 07/08/2005
- Priority Documents filed on 07/08/2005
- Specification filed on 07/08/2005
- Claims filed on 07/08/2005
- Abstracts filed on 07/08/2005
- Drawings filed on 07/08/2005
- Paper nucleotide sequence listings filed on 07/08/2005

The applicant needs to satisfy supplemental fees problems indicated below.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Additional claim fees of \$1700 as a non-small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.492(h) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fees required for this application is **\$3580** for a Large Entity:

- **\$130 Surcharge.**
 - A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).
 - The fee for submitting a specification and drawing containing more than 100 pages has not been paid in full. Applicant owes **\$1750** for **343** pages in excess of **150** pages for a large entity.
- Total additional claim fee(s) for this application is **\$ 1700**
 - **\$1700** for **36** total claims over **20**.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (571) 272-0951
- For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.
- Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

TAMALA D HOLLAND

Telephone: (703) 308-9140 EXT 209

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/541,750	PCT/EP04/00099	13311-00009-US

FORM PCT/DO/EO/905 (371 Formalities Notice)